Outcomes of Care in the United States
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Variation in Care

Variation in the use of health care services and resources has been recognized for some time. In the 1930s, the tonsillectomy rate in British schoolchildren was noted to vary widely depending upon in which district the children lived. The variation ranged from 10% to 50%. In the United States in the 1970s researchers were able to document two interesting facts about the variation in resource use in Vermont and Maine:

a. Wide variations existed in the amount of resources in the different regions and
b. Wide variation subsequently existed in the use of those resources (this may be the well known 'Field of Dreams' phenomenon.) More hospital beds meant that more people were hospitalized and spent longer stays there; more surgeons meant that more surgery was performed.

In 1989 studies were done to compare the medical resource allocation and utilization in Boston, MA and New Haven, CT. The populations of the two communities are similar in age, race and income levels and presumably would have equivalent needs and access to health care. The facts, however, were strikingly different:

- ✓ In Boston, every thousand residents used 4.3 hospital beds compared to a rate of 2.3 in New Haven
  (difference in utilization represented a difference in cost of $500 million more spent in Boston)
- ✓ Some surgical rates were higher in New Haven than Boston (e.g., CABGs and hysterectomy); others were higher in Boston (e.g., hip and knee replacement surgery).

In the face of such variation in practice and resource utilization the natural question is, "which is the right way to do it?" If the high rate is correct, are the communities with lower rates being underserved? Is their health care (and their health) inferior to that of the locality with the higher rate? Alternatively, is the low rate the more correct one? In that instance is the community with the higher rate wasting resources? Is that fair?

What is the impact on population health from such variations in the resource allocation and the use of those resources?

While we wrestle with that conundrum, the fact remains there is wide variation in health care delivery and health care services utilization across the country. It has been said, "Health care is local"; it is also true that geography is destiny.

This module covers:

- ✓ Variation in health care utilization – examples, how to calculate, etc.
- ✓ The Maine Medical Assessment Foundation – history and value
- ✓ Reasons for variation (high and low)
- ✓ Mechanisms for feedback of data and information
- ✓ PORT Studies
- ✓ Importance of understanding variation
- ✓ Success of using the findings of variation to improve care and delivery

Evidence of Quality "shortfalls" in the United States

1. In late 1999 the Institute of Medicine published a report on the rate of serious medical errors and concluded that thousands of people die *each year* in US hospitals as a result of medical errors. The resulting interest in this topic has fueled funding for centers of patient safety and research into the epidemiology of medical errors. There has also been controversy swirling about the data and the calculations the Institute used to draw its conclusions.

   The Institute's report calls for a national response that is aimed at improving the error-prone systems of care that currently exist. To point in this direction (and not at the individuals involved) will require a major shift in the attitude and legal activities of the population. But only by so doing will we be able to substantially improve the systems of care and the outcomes of that care.

   Review the report at the Institute's website at: ***To Err Is Human: Building a Safer Health System (2000) . Read the*** *Executive Summary, (pp 1-16) and the two JAMA articles (McDonald and Leape) to address the objectives of understanding the arguments on each side of this patient safety issue*

2. In 2000, the World Health Organization published its latest recurring report on the health of nations and their respective health care systems. In spite of spending more money per capita on health care than any other country, the United States did not score well on several attributes judged important in the WHO ranking system.

   Many people in the United States use the information contained in the WHO report to argue that the health care delivery system in America is in need of serious repair; the "Health Security Act of 1993" was a focal point for discussion of whether any reform was needed and whether change in the system should be wrought by political means.

   Review the linked PDF from the WHO 2000 Report Statistical Annex to determine the ranking of the United States health care system when compared against that of the 190 member nations in the World Health Organization. Attention is drawn to pp 10-13, Annex Table 1 (particularly p 13). Determine the United States' ranking in health expenditure per capita and overall health system performance. (Explanation of terms and calculations is provided in the first 9 pages of the Statistical Annex.)